Remarks/Arguments:

Claims 1, 2, 4, 5, 7, 8, 10 and 11 are pending in the above-identified application. Claims 3, 6, 9 and 12 are canceled. Basis for the amendment to claims 7, 8, 10 and 11 may be found in claim 3 and at paragraph [0001] of the subject application.

The specification was objected to as including non-standard headings. The specification has been amended to include only the section headings listed in the Office Action. Accordingly, the application is no longer subject to this ground for objection.

Claims 1, 2, 4, 5, 7, 8, 10 and 11 were objected to for several informalities. These claims have been amended, as suggested in the Office Action, to correct these informalities. Accordingly, these claims are no longer subject to rejection.

Claims 1, 2, 4, 5, 7, 8, 10 and 11 were rejected under 35 U.S.C. § 112, first paragraph for being indefinite. This ground for rejection is overcome by the amendments to the claims. In particular, the limitations of claims 3, 6, 9 and 12 have been added to claims 1, 2, 4, 5, 7, 8, 10 and 11 and claims 3, 6, 9 and 12 have been canceled. With these amendments, claims 1, 2, 4, 5, 7, 8, 10 and 11 are no longer subject to rejection under 35 U.S.C. § 112, first paragraph.

Claims 4-6 and 10-12 were rejected under 35 U.S.C. § 102(b) as being anticipated by Pingel. With respect to claims 6 and 12, this rejection is overcome by the cancellation of these claims. With respect to claims 4, 5, 10 and 11, this ground for rejection is respectfully traversed. In particular, Pingel does not disclose or suggest,

> a step of picking-up an image reflected, on the glossy plate member, of a grid pattern having an array having a bright portion and a dark portion with a constant pitch and a constant width by using an image pickup device including a CCD pixel array and enabling $Xn \pm \alpha$ CCD, pixels of the CCD pixel array to correspond to n grids, where X is an integer which satisfies the equation $X = 4P$, P being an integer greater than zero, and n and α are integers greater than zero, thereby generating α moiré fringes, upon picking-up the image of the grid pattern on said image pickup device

as set forth in claim 4, or,

> image processing means for processing the gray image data inputted from said image pickup device,
>
> wherein α moiré fringes are generated by the correspondence of $Xn \pm \alpha$ CCD pixels of the CCD pixel array to n grids upon picking-up the grid pattern to said image pickup device, where X is an integer which satisfies the equation $X = 4P$, P being an integer greater than zero, and n and α are integers greater than zero,

as set forth in claim 5. While not identical, claims 10 and 11 include similar limitations.

The problem to be solved by the present invention is described in paragraph [0045]. In particular, the number 4p of CCD pixels does not accurately correspond to the projected grid.

As a consequence, when the regular corresponding relationship between the grid and the pixels does not match, the invention provides a method for precisely detecting the defect in the transparent plate member.

Pingel corresponds to PCT Japanese Translation no. 2001-502799, described at page 2 of the subject application. Pingel discloses that the grid frequency of the camera pixels and the grid frequency of the grid are multiples of one another. (See col. 7, lines 18-22). Thus, the problem addressed by the present application does not exist. In the Office Action, it is asserted that three pixels correspond to one pair of dark and light areas in Pingel, and then the limitation of the above claims is met if p=1 in Applicant's claims. Applicant respectfully disagrees with this assertion. If p=1 then $(4\pm\alpha/4)$ pixels corresponds to one pair of dark and light areas of the present invention. Moreover, if p=1 then n pairs of dark and light areas correspond to $4n\pm\alpha$ pixels in the present invention. Because α is an integer greater than zero, $4n\pm\alpha$ and n are not multiples of one another, as required by Pingel.

In the present invention as claimed in claims 4, 5, 10 and 11, for example, moiré fringes are generated when the output of a line sensor camera is indicated as one-dimensional gray data, and one peak of moiré appears each time one CCD pixel is deviated (i.e. $\alpha=1$), as described in paragraph [0051] of the subject application.

Because Pingel does not disclose or suggest at least this limitation of claims 4, 5, 10 and 11, these claims are not subject to rejection under 35 U.S.C. § 102(b) in view of Pingel.

Claims 1-3 and 7-9 were rejected under 35 U.S.C. § 103(a) as being obvious in view of Pingel and Minato. With respect to claims 3 and 9, this ground for rejection is overcome by the cancellation of these claims. With respect to claims 1, 2, 7 and 8 this ground for rejection is respectfully traversed for the same reason as described above with regard to the rejection of claims 4, 5, 10 and 11. While not identical, claims 1, 2, 7 and 8 include limitations that are similar to the limitations of claims 4, 5, 10 and 11. As described above, Pingel does not disclose at least one limitation of these claims. Minato concerns a method and apparatus for inspecting transparent objects in which a moiré patterned carrier is used to identify the defect. (See col. 4, lines 20-64. The moiré pattern is used only as a reference pattern, it does not address the problem addressed by the subject invention. Thus, Minato does not provide the material that is missing from Pingel. Consequently, claims 1, 3, 7 and 9 are not subject to rejection under 35 U.S.C. § 103(a) in view of Pingel and Minato.

In view of the foregoing amendments and remarks, Applicant requests that the Examiner reconsider and withdraw the rejection of claims 1, 2, 4, 5, 7, 8, 10 and 11.

Respectfully submitted,

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